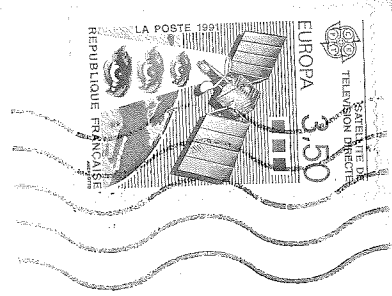




Everywhere I go...
Little Reminders of
You... you are the
Most Fun
A Toi

CARTE DE COLLECTION



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BREWSTER KAHLE...
3035 23RD ST...
SAN FRANCISCO, CA...
94110 USA

Prospero is defined as a computer protocol to permit the Internet to be viewed as a user-centered file system. Each user may configure an individual view of the Internet as a distributed file system, called a virtual file system. The contents of a directory may vary depending on the path by which that directory was reached.

The contents of a file or a directory may be modified by the addition of a filter, written in C, which modifies the behavior of the search or the apparent contents of the file or directory. All in all, the view of the distributed file system is completely customizable by the user. Prospero is implemented as a library that intercepts the usual `open()`, `close()`, `readdir()` and suchlike calls, and conditionally replaces them with calls to the Prospero virtual file system. An environment variable controls whether and under what conditions names are resolved in the native file system namespace or in the Prospero namespace.

And that is how the FTP database is made available. A Prospero client, named "archie," is freely available to interrogate the database, which is now usually referred to simply as the "Archie database." The archie program has the syntax of a text search utility. One merely hands it a keyword, or a more complicated query if desired, and archie uses the Prospero protocol to query the database at McGill. The result is a listing of each known host on the Internet whose anonymous FTP directory contains a file matching the query, together with the pathname of the file on that host (see "Dialoging with archie").

Certainly, archie could be implemented without the Prospero protocol. In fact, in the ordinary way of business, it would be implemented by applying for a TCP port number for the service, and defining a (much simpler!) protocol to send the query and the response. Possibly, like FTP, it would merely adopt the Telnet protocol. However, the implementors took the broader view that if the Prospero protocols were linked to a widely used application, experimentation with

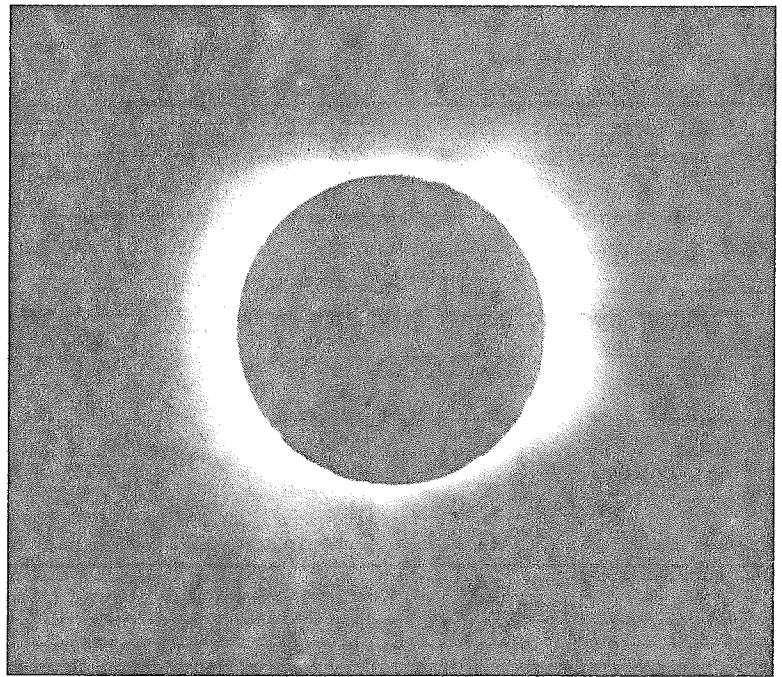
Prospero itself would be encouraged. Certainly the usefulness of the archie server proves that Prospero can do at least one thing well. The hope is that once a user puts the distribution together to run the archie client, other uses will readily become apparent. So far this seems to be working.

Prospero provides the user with a view of the Internet as a distributed file system...at least, that part of the Internet which has agreed to run Prospero and make material available.

This, together with the archie client software, serves to reduce some of the burden of locating and using information around the net. However, it does not solve the more general problem of locating arbitrary data sources around the network. This rather more formidable task has been undertaken by the Wide Area Information Servers (WAIS) project at Thinking Machines Inc., under Brewster Kahle.

Mr. Protocol, expressing a rare positive opinion of something new, thinks

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Dialoging with archie

% archie printf-scanf

021 Host speedy.cs.uiuc.edu

Location: /pub/MANCHESTER/july_update/usenet/printf-scanf.st

File -rw-r-r- 00013654 1991 Jun 20 15:04:00 GMT

printf-scanf.st

022 Host speedy.cs.uiuc.edu

Location: /pub/MANCHESTER/flat/printf-scanf.st

File -rw-r-r- 00013298 1990 Apr 30 00:00:00 GMT

printf-scanf.st

that the WAIS system is the first generally available glimpse of the Internet as it will someday appear. WAIS provides the user with a single generalized interface to information of almost any conceivable type, and as an added bonus, does this by use of an ISO protocol, rather than by requiring something so incompatible as to be automatically crossed off by standards-conscious managers everywhere. The protocol used is ANSI Z39.50-1988,

describing the Information Retrieval application-layer protocol. What WAIS actually does is provide a common interface allowing search and retrieval of data from all over the Internet.

The Information Retrieval protocol specifies how queries and responses may be sent, but it does not specify the actual usage of the application. WAIS turns out to be much more than just a database interface. In fact, if

WAIS were, say, a way of executing RPG II programs over the Internet, Mr. Protocol would doubtless be less amazed, and a great deal less interested. It seems as if people are always attempting to provide the most modern facilities for the most perverse and backward services. In fact, Mr. Protocol feels that many of the most widely advertised products in the "mainframe" computer press are the technical equivalent of laser-sighted, nuclear-powered siege engines.

This certainly does not include WAIS.

The central idea behind WAIS is similar to Prospero: treating the Internet as a sort of extended file system. In this case, though, the problem addressed is that of keeping information up-to-date. In the case of the archie server, it is the server's business to keep itself updated with respect to the contents of the various anonymous FTP archive sites around the net, which it does by interrogating each site periodically. It is the user's responsibility, however, to interrogate the archie server whenever updated information is wanted. WAIS takes

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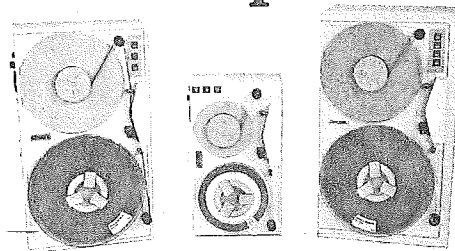
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the view that collections of information should at least potentially be able to update themselves actively, so that the user can pose a query once, yet be able to see updated information each time he or she looks at the folder containing the query response.

WAIS queries are currently handled by keyword search, so questions can be phrased as English questions, or simply as lists of words having to do with the subject being queried. Additionally, when a document is discovered that the user finds to be a good match to his query, that document may be given as an example: "Find more documents like this one!"

What a user stores in the WAIS system then is not a view of a file system or a network, but a question, or a series of questions, which may be answered many times, in many ways. This facility of abstraction away from the details of network implementation is, Mr. Protocol feels, the best prediction yet of the future of network usage. More attention will be paid to the resulting information than to the protocol used to get it, at least by the user. Administrators, of course, will have to make sure that everything runs smoothly behind the scenes. Though he may not appear in public quite so regularly, it will be a long time before Mr. Protocol is out of a job. ➤

Mike O'Brien has been noodling around the UNIX world for far too long a time. He knows he started out with UNIX Research Version 5 (not System V, he hastens to point out), but forgets the year. He thinks it was around 1975 or so.

He founded and ran the first nationwide UNIX Users Group Software Distribution Center. He worked at Rand during the glory days of the Rand editor and the MH mail system, helped build CSNET (first at Rand and later at BBN Labs Inc.) and is now at an aerospace research corporation.

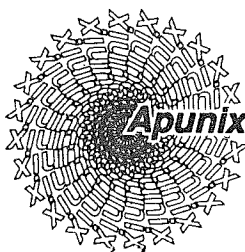
Mr. Protocol refuses to divulge his qualifications and may, in fact, have none whatsoever. His email address is amp@expert.com.

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Don't forget to get a credit report on ourselves !

Assumptions:

- * 100% financing
- * House value \$220,000
- * Housemates pay total mortgage and maintenance fee
- * 7 Housemates (possible no guest room)
- * Assume competitive with rents: Max of \$300/person = \$2,100
- * Closing costs are \$5,000 (maybe more?) points, trans fee, lawyer

Major Necessary House Maintenance (next 2 years):

Replace furnace and hot water heater	4,200
Fix roof	2,500
Windows (necessary)	1,000
<u>Windows/Rug (optional)</u>	<u>4,000</u>
Total	11,700

to pay over a 5 year period at 8% = \$250 per month = 35/person /mo.

Cost to create a 2nd unit

for coop/zoning purposes 2,000

to pay over a 5 year period at 8% = \$280 per month

Costs/month:

<u>all based on 30 yr.</u>	<u>@8%</u>	<u>@8.5%</u>	<u>@9%</u>
Mortgage (225K)	1650	1730	1810
Taxes (2500/12)	210	210	210
Insurances	50	50	50
<u>Maintenance fee</u>	<u>250</u>	<u>250</u>	<u>250</u>
Total	2,160	2,240	2,320

Not including mortgage insurance Down Payment (included above)

Ask about all taxes Closing costs (included above)

If Coop/boarding house what are the extra fees?

Financial Benefits: Equity in house
Tax advantages

Liability/Responsibility: Who? Maintenance?

Vicki,

I really want to be your friend and I feel like I maybe blowing it on form rather than content. I like the way you carefully consider ideas and thoughts. I am not as articulate, but I also ponder these things. Try to touch the ~~best~~ spot.

A colleague put it "we are not trying to replace newspapers, or yellow pages, or magazines. We are trying to replace the printer and the paper boy." I think ~~this puts it~~ the technology in a useful light. ~~My cat~~ The guy who said this works in the publishing trade and consults for a number of companies; his concern is in the packaging of worthwhile content. He believes the technology has been developing without a concern for content.

Another way of

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